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ILLINOIS COMMERCE COMMISSION

DOCKET NO. 01-0620

DIRECT TESTIMONY

OF

KIRITKUMAR S. SHAH

Submitted on Behalf

of

CENTRAL ILLINOIS PUBLIC SERVICE COMPANY

d/b/a AmerenCIPS

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Q1. Please state your name, business address, and position with Ameren Services Company.

A1. My name is Kiritkumar (Kirit) S. Shah. My business address is 1901 Chouteau Avenue, St. Louis, Missouri, 63103. I am presently the Supervising Engineer of the Transmission & Interconnections group in the Electrical Engineering & Transmission Planning Department for Ameren Services Company ("Ameren Services"). The Transmission Planning Department of Ameren Services provides various technical services to AmerenCIPS and to Union Electric Company, d/b/a AmerenUE.

Q2. How long have you been employed by Ameren Services or one of its affiliate companies?

A2. For 24 years. This includes employment with Ameren Services since January of 1998, and with Union Electric Company ("UE") prior to 1998.

Q3. How long have you held your present position of Supervising Engineer?

A3. For 12 years. This includes employment with Ameren Services and UE.

Q4. What is your educational background?

A4. I received a Bachelor of Science degree in Electrical Engineering from the M. S. University, Baroda, India. I also received Master of Science and Ph. D. degrees in Electrical Engineering from the University of Missouri – Rolla located in Rolla, Missouri.

Q5. Are you a registered Professional Engineer?

A5. Yes. I am a registered Professional Engineer in Illinois and Missouri.

Q6. Please describe your professional experience.

A6. I have been employed by either Ameren Services or UE since 1976. From 1976 to 1988 I was assigned to the Transmission Planning (formerly System Planning) Department as an Engineer. In 1989, I was promoted to my present position in the Transmission Planning Department. In 1998, my group, Transmission & Interconnections (T&I), was merged with the Electrical Engineering Department. At Ameren Services, the T&I group is responsible for determining the optimal development of the transmission system, generally connected at or above 100 kV.

The majority of T&I group's activities involve performing engineering studies to identify transmission system limitations and develop mitigation plans using power system analysis tools. As a Supervising Engineer, I am responsible for directing and coordinating these engineering studies. I have been actively involved in the Mid-America Interconnected Network (MAIN) Regional Reliability Council technical committees, presently serving on the MAIN Engineering Committee and Transmission Task Force Steering Committee, and as a Chairman of the MAIN Transmission Assessment Studies Group. Even before the merger of UE and CIPSCO, through my work with the MAIN organization, of which both AmerenUE and AmerenCIPS were members, and the various engineering studies sponsored by MAIN, I became familiar with the AmerenUE and AmerenCIPS transmission systems in Missouri and Illinois, as well as with the interconnected neighboring systems.

Q7. What is the purpose of your testimony?

A7. The purpose of my testimony is to support the Petition filed by AmerenCIPS for a Certificate of Convenience and Necessity by providing information regarding the need for a second 138 kV transmission line, approximately 17 miles in length, in Ford County, Illinois from AmerenCIPS' Gibson City South Substation to AmerenCIPS' Paxton East Substation.

Q8. Why does AmerenCIPS propose to build this line?

A8. The proposed line is needed to provide adequate outlet transmission capacity for one of AmerenCIPS designated Network Resources, the Gibson City generation, during a transmission facility outage condition. The additional transmission capacity will enhance reliability of service to Ameren customers, particularly those in the Ford County area.

Q9. Can you provide the maximum capability of the existing system lines connected at the Gibson City South Substation?

A9. Yes. Presently there are two 138 kV system lines connected at the Gibson City South Substation. One line, owned by AmerenCIPS, is the Gibson City South to Paxton East line. The emergency rating of this line is 168 MVA for summer and 204 MVA for winter operation. The second line, owned by Illinois Power (IP), is the Gibson City South to Brokaw (IP Substation) line. The emergency rating of this line is 164 MVA for summer and 202 MVA for winter operation.

Q10. What is the maximum generating capability of the generation at the Gibson City generating Plant?

A10. With and without wet compression in-service, the total maximum generating capability of two generating units at the Gibson City Plant is 234 MW and 206 MW, respectively, for summer operation. The maximum plant capability for winter operation is 270 MW.

Q11. Can you explain the contingency overload problem?

A11. Yes. Presently, the Gibson City South 138-69 kV substation supplies about 38 MW of load during summer peak conditions. If one of the 138 kV lines connected to the Gibson City South Substation is out of service, the remaining line has to carry the full generation output of the Gibson City plant minus the load. In other words, if the existing Gibson City South to Paxton East line is out of service at the summer peak time, the remaining line has to carry 196 MW, which is about 19.5% over its summer emergency rating. Similarly if the Gibson City South to Brokaw line is out of service, the remaining line has to carry 196 MW, which is about 16.7 % over its summer emergency rating. A similar problem exists for winter operation. Thus, depending upon the amount of load served from the Gibson City South substation during peak and other times, the overload could be about 15% to 35% under a single contingency condition.

Q12. What procedure is in place to handle this contingency overload condition until *the new line goes in-service?*

A12. Presently separate relays measure the flow on each of the two outlet lines. If flow exceeds either line's emergency rating, a signal is sent to the Gibson City Plant to initiate an automated generation reduction scheme to reduce generation on Unit #2. This measure, however, is considered temporary as adequate plant transmission outlet capability should be provided under a single contingency condition.

Q13. Did you consider any other option instead of building the proposed new line?

A13. Yes. We considered upgrading both of the existing lines.

Q14. Why was this option not implemented?

A14. This option was not implemented for two reasons, reliability and cost. Reliability is a concern because each of the existing lines, one at a time, would have to be taken out of service for an extended period to upgrade it. During this time, the Gibson City Plant generation would have to be reduced, and if the remaining in-service line experiences a forced outage, then the total generation as well as the supply to the Gibson City South substation load would be lost. The other reason this option was not pursued is that it would cost about ~~$1,433,000~~ $2,330,000 more than building the proposed new line.

Q15. Does the proposed new line provide any advantages to the customers in Illinois?

A15. Yes. Availability of full generation at the Gibson City Plant should benefit electricity customers in the local AmerenCIPS service area, and also surrounding areas.

Q16. Are there any disadvantages associated with the proposed line?

A16. No.

Q17. Does this conclude your testimony?

A17. Yes, it does.